

1. In a computing system that has access to one or more fonts, each font including glyphs representing the corresponding characters of the font, a method for using externally parameterizeable constraints to synthesize a font variant, the method comprising:

accessing a scaled font that has been scaled for rendering at a target size and a target resolution, the scaled font referencing hints that constrain how glyphs of the scaled font are to be rendered at the target size and target resolution;

accessing one or more external font parameters that alter how the glyphs of the scaled font are to be rendered; and

applying the one or more external font parameters to the scaled font to synthesize a font variant such that the hints from the scaled font are preserved in the font variant.

2. The method as recited in claim 1, wherein accessing a scaled font that has been scaled for rendering at a target size and a target resolution comprises accessing a scaled font that includes font-hinting language instructions.

3. The method as recited in claim 1, wherein accessing one or more external font parameters that alter how the glyphs of the scaled font are to be rendered comprises accessing a parameter that represents the glyphs of the scaled font are to be positionally compressed wherein the positional compression is in at least one of a vertical and horizontal direction.

4. The method as recited in claim 1, wherein accessing one or more external font parameters that alter how the glyphs of the scaled font are to be rendered comprises

accessing a parameter that represents the glyphs of the scaled font are to be positionally expanded wherein the positional expansion is in at least one of a vertical and horizontal direction.

5. The method as recited in claim 1, wherein accessing one or more external font parameters that alter how the glyphs of the scaled font are to be rendered comprises accessing a parameter that represents the glyphs of the scaled font are to be weight compressed wherein the weight compression is in at least one of a vertical and horizontal direction.

6. The method as recited in claim 1, wherein accessing one or more external font parameters that alter how the glyphs of the scaled font are to be rendered comprises accessing a parameter that represents the glyphs of the scaled font are to be weight expanded wherein the weight expansion is in at least one of a vertical and horizontal direction.

7. The method as recited in claim 1, wherein accessing one or more external font parameters that alter how the glyphs of the scaled font are to be rendered comprises accessing a parameter that represents the glyphs of the scaled font are to be offset wherein the offset is in at least one of a vertical or horizontal direction.

8. The method as recited in claim 1, wherein accessing one or more external font parameters that alter how the glyphs of the scaled font are to be rendered comprises accessing font-hinting language instructions.

9. The method as recited in claim 1, wherein applying the one or more external font parameters to the scaled font to synthesize a font variant such that the hints are preserved in the font variant comprises compressing the scaled font in at least one of a vertical and horizontal direction.

10. The method as recited in claim 1, wherein applying the one or more external font parameters to the scaled font to synthesize a font variant such that the hints are preserved in the font variant comprises expanding the scaled font in at least one of a vertical and horizontal direction.

11. The method as recited in claim 1, wherein applying the one or more external font parameters to the scaled font to synthesize a font variant such that the hints are preserved in the font variant comprises offsetting the scaled font in at least one of a vertical and horizontal direction.

12. The method as recited in claim 1, wherein applying the one or more external font parameters to the scaled font to synthesize a font variant such that the hints are preserved in the font variant comprises applying the one or more external font parameters to the scaled font to synthesize a font variant such that standardized distances and reference heights of the scaled font are preserved.

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13. The method as recited in claim 1, further comprising:
rendering glyphs of the font variant that comply with the one or more external font parameters and the hints.

14. The method as recited in claim 13, wherein rendering glyphs of the font variant that comply with both the one or more external font parameters and the hints comprises rendering glyphs of the font variant that comply with the one or more external font parameters and standardized distances and reference heights.

15 The method as recited in claim 13, wherein rendering glyphs of the font variant that comply with both the one or more external font parameters and the hints comprises performing scan conversion on font variant outlines that comply with the one or more external font parameters and the hints.

16. The method as recited in claim 13, wherein rendering glyphs of the font variant that comply with both the one or more external font parameters and the hints comprises addressing and setting the intensity for individual sub-components of a display device so as to more accurately render the glyphs of the font variant.

17. The method as recited in claim 1, further comprising:
scaling the glyphs of a font file for rendering at the target size and target resolution.

18. The method as recited in claim 1, further comprising:
caching the font variant such that the font variant can be efficiently accessed in response to subsequent application program commands.

19. A computer program product for use in a computing system that has access to one or more fonts, each font including glyphs representing the corresponding characters of the font, the computer program product for implementing a method for using externally parameterizeable constraints to synthesize a font variant, the computer program product comprising one or more computer-readable media having stored thereon computer executable instructions that, when executed by a processor, cause the computing system to perform the following:

access a scaled font that has been scaled for rendering at a target size and a target resolution, the scaled font referencing hints that constrain how glyphs of the scaled font are to be rendered at the target size and target resolution;

access one or more external font parameters that alter how the glyphs of the scaled font are to be rendered; and

apply the one or more external font parameters to the scaled font to synthesize a font variant such that the hints are preserved in the font variant.

20. A computing system, comprising:
 - one or more processors; and
 - one or more computer-readable media, having stored thereon one or more fonts, each font including glyphs representing the corresponding characters of the font and having stored thereon a hint processor that can be executed by the one or more processors, the hint processor being configured to:
 - access a scaled font that has been scaled for rendering at a target size and a target resolution, the scaled font referencing hints that constrain how glyphs of the scaled font are to be rendered at the target size and target resolution;
 - access one or more external font parameters that alter how the glyphs of the scaled font are to be rendered; and
 - apply the one or more external font parameters to the scaled font to synthesize a font variant such that the hints are preserved in the font variant.